



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,884	07/16/2003	Marvin I. Fredberg	RAY-132J	9093
7590 Iandiorio & Teska 260 Bear Hill Road Waltham, MA 02451-1018			EXAMINER SINGH, ARTI R	
			ART UNIT 1771	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/25/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/620,884

Applicant(s)

FREDBERG ET AL.

Examiner

Ms. Arti Singh

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments see response filed 10/16/06 have been fully considered and are persuasive. All previously made rejections are now withdrawn in light of the Declaration, which antedates the previously cited prior art.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With regard to claims 1, 19, 34 and 35 specifically (which recite "radome") are found to be vague and unclear or not clearly envisioned as what the actual structure of the claims are. The preamble language recites a radome however no structure is given to the same other than a fabric material comprising polyester polyarylate fibers in a resin matrix.

Further, Applicant's amendments to Claim 1 adds the limitation that "structured to increase the radome strength and reduce radio frequency transmission losses through the radome," how is this being accomplished? Does the presence of just the fibers with the resin accomplish this task? This new limitation alludes one to believe that there should be more or additional recitations as what the actual structure of the radome is. For the purposes of examination until clarity is provided the Examiner will understand that the fibers found within a resin and that is used in voluminous structures like inflatable structures, airships etc.

Additionally, this would also further Applicant's stance on differences between a rigid and flexible radome.

Art Unit: 1771

Claims 2-18, and 20-33 are objected to, as they are dependant upon a rejected base claim (1, 19, 34 and 35).

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-35 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over USPN 6074722 issued to Cuccias in view of USPN 5357726 issued to Effenberger et al.

7. Cuccias disclose a laminate material suitable for use as the wall of a pressurized container like those used in lighter than air vehicles (inflatable blimps) [abstract]. Their multilayered laminate may comprise of multiple woven [column 2, line 62] or knitted fabric layers [column 3, line 9]. Said fabrics are made from high strength yarns like KEVLAR™ and VECTRAN™ (polyester polyarylate) [column 4]. The fabric layers or plies may be encapsulated in a flexible resin matrix [column 4, line 64]. Said resin is preferably polyurethane [column 4, line 15]. The instant patent teaches that one or more layers may be used along with having a varying orientation within said plies if desired, and thereby meets

Art Unit: 1771

the limitations sought in claims 13-16 and 31-33. The laminate may have a final layer (80), which is bonded to the outermost side of the laminate and serves the purpose of UV protection. Said outer layer is usually fluoropolymer based such as TEDLAR™, which is a polyvinyl fluoride. The Examiner is equating this layer to be equivalent to the skin layer desired in claim 5. It should be noted that fluoropolymers are inherently hydrophobic in nature. Cuccias et al disclose what is set forth above but do not specifically teach the desired chemical make up of the outermost or skin layer as desired by Applicant. Effenberger et al remedy this.

Effenberger et al teach flexible reinforced textile composites which include an outer hydrophobic protective film layer (abstract). Said film layer comprises at least one or more films, at least one of which comprises a TFE polymer, preferably PTFE, or TFE, HFP or VF2. These films may be applied by any know technique in the art such as melt extrusion, casting, skiving, and paste extrusion (column 4). A person having ordinary skill in the art at the time the invention was made would have found it obvious to have used the outer layer of Effenberger et al in the composite of Cuccias, who already alludes to the use of a protective outermost layer. One would have been motivated to do this as (as shown in column 3, lines 5-11) to create an end product which has the ability to resist the deleterious effects of liquid water.

With regard to the claim limitation of the composite being “structured to increase the radome strength and reduce radio frequency transmission losses through the radome”, it is the position of the Examiner that, it is reasonable to presume that this property is inherent to the composite of Cuccias/Effenberger et al. Support for said presumption is found in the use of like materials (i.e. VECTRAN™ fibers encapsulated in a polyurethane resin matrix, and made into a multiply composite having an outer skin layer which both structurally and

Art Unit: 1771

chemically are similar to that of Applicant's). The burden is upon Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In addition the presently claimed property of increasing the radome strength and reducing radio frequency transmission losses through the radome, would obviously have been present once the Cuccias/Effenberger et al. product is provided.

It should be noted, as set forth in the 112-2 rejection the preamble language of radome is not given any weight as no specific structure or criticality has been shown in the claims. However, such fabric systems are known to be used in the same art of endeavor. Evidence of this can be seen in the background section of USPN 6998165 [Summary of Invention].

Conclusion


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 6998165; USPN 6074722 and US PUB 2006/0068158 A1.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ms. Arti Singh whose telephone number is 571-272-1483. The examiner can normally be reached on M-T 9-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1771

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ms. Arti Singh
Primary Examiner
Art Unit 1771

ars